

# **EXHIBIT VV**

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## ATLAS INCIDENT DESCRIPTION & FACTUAL SUMMARY

For completeness, this incident description and factual summary should be read in conjunction with the contemporaneously submitted response to Question 62.

### **Background:**

On October 20, 2017, PG&E filed with the CPUC an Electric Safety Incident Report (Incident No. 171020-8589) concerning an incident that occurred near 4011 Atlas Peak Road, City of Napa, Napa County (the “Atlas 1 incident location,” as defined by the CPUC’s December 7, 2017, letter). On October 23, 2017, PG&E filed with the CPUC an Electric Safety Incident Report (Incident No. 171023-8596) concerning an incident that occurred near 3683 Atlas Peak Road, City of Napa, Napa County (the “Atlas 2 incident location,” as defined by the CPUC’s December 7, 2017, letter and, together with the Atlas 1 incident location, the “incident locations”). The Atlas 2 incident location is approximately a quarter mile south of the Atlas 1 incident location.

When PG&E was granted access to the Atlas 1 incident location, PG&E observed a broken tree limb and broken field-phase primary insulator on the Pueblo 1104 (12 kV) Circuit.<sup>1</sup> A green, healthy tree limb fell from a California White Oak/Valley Oak that was rooted approximately 15 feet from the distribution conductors.<sup>2</sup>

When PG&E was granted access to the Atlas 2 incident location, PG&E observed a California Black Oak tree that had broken at the base and was lying on the ground.<sup>3</sup> The base of the California Black Oak tree was burnt and rooted approximately 20 feet from the distribution conductors.<sup>4</sup>

According to CAL FIRE’s website, the Atlas fire started at 9:52 PM on October 8, 2017.<sup>5</sup> CAL FIRE has collected evidence near the incident locations.<sup>6</sup>

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<sup>1</sup> PGE-NBF-0000002800 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008M)).

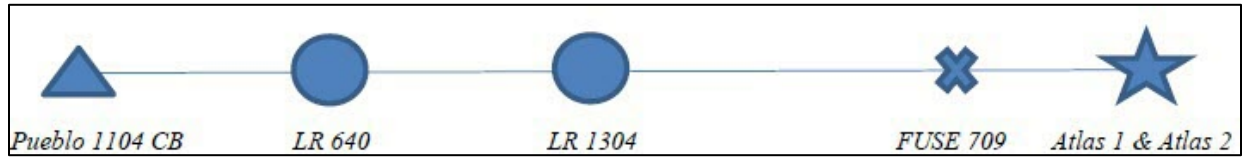
<sup>2</sup> PGE-NBF-0000002800 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008M)).

<sup>3</sup> PGE-NBF-0000002820 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008P)).

<sup>4</sup> PGE-NBF-0000002820 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008P)).

<sup>5</sup> CAL FIRE, Atlas Fire Incident Information, [http://cdfdata.fire.ca.gov/incidents/incidents\\_details\\_info?incident\\_id=1866](http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=1866).

<sup>6</sup> Atlas, 20-Day Electric Incident Report to the CPUC (EI171008M); Atlas, 20-Day Electric Incident Report to the CPUC (EI171008P).

**Incident Overview:**

Based on PG&E records, on October 8, 2017, between 9:17 PM and 9:32 PM, 16 smart meters located downstream of the incident locations recorded a series of power off/on events.<sup>7</sup> From 9:32 PM to 10:00 PM, 34 smart meters (including the 16 above) located downstream of the incident locations recorded a series of power off/on events.<sup>8</sup>

According to PG&E records, a PG&E troubleman responded to an outage report on the Pueblo 1104 Circuit on the night of October 8.<sup>9</sup> The troubleman cleared a wire down at 1597 Estee Avenue, which is over four and a half miles to the southwest of the incident locations,<sup>10</sup> and reported fire on Atlas Peak Road at 10:42 PM.<sup>11</sup> According to PG&E records, at 10:59 PM, the same troubleman manually opened Line Recloser 640, de-energizing the line beyond Line Recloser 640, including the incident locations.<sup>12</sup>

Line Recloser 640 was manually closed on October 12, 2017 at 7:11 PM, restoring power to 55 customers, but the incident locations remained de-energized at this time.<sup>13</sup>

On October 12, according to PG&E records, a compliance inspector and an engineering estimator were the first PG&E personnel to reach the incident locations before CAL FIRE took possession of the sites. They patrolled the area to assess what PG&E equipment needed to be replaced. Near the Atlas 2 incident location, the compliance inspector and estimator observed plates, utensils and a camp stove on the ground.<sup>14</sup>

On October 19, 2017, PG&E observed a broken tree limb and broken field-phase primary insulator on the Pueblo 1104 (12 kV) Circuit near the Atlas 1 incident location.<sup>15</sup> A green, healthy tree limb fell from a California White Oak/Valley Oak that was rooted approximately 15

<sup>7</sup> PGE-CF\_00000048 (Pueblo 1104 Smart Meter Data); PGE-CF\_00000049 (Pueblo 1104 Smart Meter Data).

<sup>8</sup> PGE-CF\_00000048 (Pueblo 1104 Smart Meter Data); PGE-CF\_00000049 (Pueblo 1104 Smart Meter Data).

<sup>9</sup> 2017.12.12 Interview Memo with D. Rupp & M. Bock.

<sup>10</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>11</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>12</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>13</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>14</sup> 2018.08.30 Interview Memo with M. Isaak; 2017.07.18 Interview Memo with E. Romero.

<sup>15</sup> PGE-NBF-0000002800 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008M)).

feet from the distribution conductors and came to rest on the lower of two communications cables.<sup>16</sup> The conductors were 6CU (copper), installed in 1930.<sup>17</sup>

On October 21, 2017, PG&E observed a California Black Oak tree that had broken at the base and was lying on the ground near the Atlas 2 incident location<sup>18</sup>. The base of the California Black Oak tree was burnt and rooted approximately 20 feet from the distribution conductors.<sup>19</sup> The conductors were 6CU (copper), installed in 1930.<sup>20</sup>

On October 22, 2017, PG&E completed repair work at the incident locations.<sup>21</sup> Based on PG&E records, power was restored to the incident locations on October 22, 2017, at 4:27 PM when Switch 861209 was manually closed.<sup>22</sup>

### **Evidence Collection:**

CAL FIRE collected a primary conductor, a primary insulator and a California White Oak/Valley Oak tree branch and communications cable from the Atlas 1 incident location.<sup>23</sup> CAL FIRE collected broken conductor and a portion of the bottom of a California Black Oak tree from the Atlas 2 incident location.<sup>24</sup> PG&E does not know whether CAL FIRE collected additional evidence at the incident locations.

PG&E collected the following items of evidence from the Atlas 1 incident location:

- November 15, 2017: a California White Oak/Valley Oak tree stem piece

PG&E collected the following items of evidence from the Atlas 2 incident location:

- October 21, 2017: conductors, insulator and insulator brackets
- November 15, 2017: Manzanita tree and limb and California Black Oak tree parts, including trunk pieces, limbs and branches
- December 7, 2017: California Black Oak tree stump and melted smart meter<sup>25</sup>

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<sup>16</sup> PGE-NBF-0000002800 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008M)).

<sup>17</sup> PGE-CPUC\_DR-112117\_Common\_Q35; PGE-CPUC\_DR-12117\_Common\_Q36 -- 12/29/17 Response to CPUC Q35; Q36.

<sup>18</sup> PGE-NBF-0000002820 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008P)).

<sup>19</sup> PGE-NBF-0000002820 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008P)).

<sup>20</sup> PGE-CPUC\_DR-112117\_Common\_Q35 --12/29/17 Response to CPUC Q35; Q36.

<sup>21</sup> PGE-CPUC\_00013272 (ILIS Outage Report 17-0089255).

<sup>22</sup> PGE-CPUC\_00013272 (ILIS Outage Report 17-0089255).

<sup>23</sup> PGE-CPUC\_00012216 (log of evidence collected by CAL FIRE).

<sup>24</sup> PGE-CPUC\_00012216 (log of evidence collected by CAL FIRE).

<sup>25</sup> PGE-CPUC\_00017161 (log of evidence collected by PG&E).

**Timeline:**

<b>Atlas</b>		
<b><u>Event</u></b>	<b><u>CPUC Bates Number Reference</u></b>	<b><u>CAL FIRE Bates Number Reference</u></b>
<u>October 8, 2017, 9:17 to 9:32 PM:</u> 16 smart meters downstream of the incident locations recorded a series of power off/on events. <sup>26</sup>		
<u>October 8, 2017, 9:32 to 10:00 PM:</u> 34 smart meters downstream of the incident locations recorded a series of power off/on events. <sup>27</sup>		
<u>October 8, 2017, 9:52 PM:</u> According to CAL FIRE's website, the Atlas fire started at 9:52 PM on October 8, 2017. <sup>28</sup>		
<u>October 8, 2017, 10:42 PM:</u> Troubleman cleared wire down at 1597 Estee Avenue and reported fire on Atlas Peak Road. <sup>29</sup>	PGE-CPUC_00013215	PGE-CF_00136128
<u>October 8, 2017, 10:59 PM:</u> Troubleman manually opened Line Recloser 640. <sup>30</sup>	PGE-CPUC_00013215	PGE-CF_00136128
<u>October 12, 2017, 7:11 PM:</u> Line Recloser 640 closed manually, restoring service to 55 customers downstream of Line Recloser 640. <sup>31</sup> Incident locations remained de-energized.	PGE-CPUC_00013215, at -216	PGE-CF_00136128, at -129
<u>October 12, 13, 2017:</u> Compliance inspector and engineering estimator patrolled incident locations.		
<u>October 19, 2017:</u> PG&E observed a broken tree limb and broken field-phase primary insulator on the Pueblo 1104 (12 kV) Circuit near the Atlas 1 incident location. <sup>32</sup>		

<sup>26</sup> PGE-CF\_00000048 (Pueblo 1104 Smart Meter Data); PGE-CF\_00000049 (Pueblo 1104 Smart Meter Data).

<sup>27</sup> PGE-CF\_00000048 (Pueblo 1104 Smart Meter Data); PGE-CF\_00000049 (Pueblo 1104 Smart Meter Data).

<sup>28</sup> CAL FIRE, Atlas Fire Incident Information, [http://cdfdata.fire.ca.gov/incidents/incidents\\_details\\_info?incident\\_id=1866](http://cdfdata.fire.ca.gov/incidents/incidents_details_info?incident_id=1866).

<sup>29</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>30</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>31</sup> PGE-CPUC\_00013215 (ILIS Outage Report 17-0085211).

<sup>32</sup> PGE-NBF-0000002800 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008M)).

<u>October 21, 2017</u> : PG&E observed a California Black Oak tree that had broken at the base near the Atlas 2 incident location. <sup>33</sup>		
<u>October 22, 2017</u> : PG&E completed repair work at the incident locations. <sup>34</sup>	PGE-CPUC_00013272	PGE-CF_00136150
<u>October 22, 2017, 4:27 PM</u> : Switch 861209 manually closed, restoring service to the incident locations. <sup>35</sup>	PGE-CPUC_00013272	PGE-CF_00136150

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<sup>33</sup> PGE-NBF-0000002820 (Atlas, 20-Day Electric Incident Report to the CPUC (EI171008P)).

<sup>34</sup> PGE-CPUC\_00013272 (ILIS Outage Report 17-0089255).

<sup>35</sup> PGE-CPUC\_00013272 (ILIS Outage Report 17-0089255).

**Factual Report Guidance:**

PG&E is providing Incident Description and Factual Summaries (the “Reports”) for each incident location, as defined by the CPUC’s December 7, 2017, letter. In addition to Question 62, these Reports provide a complete response to Question 1. These Reports also provide a partial response to Question 54. Documents and attachments responsive to Question 54 are being produced with that response.

PG&E’s review and collection of records are ongoing, and these Reports are based on information that PG&E believes may be relevant to the incident location, as defined by the CPUC’s December 7, 2017, letter, based on information currently known. In preparing these Reports, PG&E has not included data or information that may not be relevant to the incident location, as defined by the CPUC’s December 7, 2017, based on information currently known, for example:

- Transmission-level outages, which because of their wide-spread impact, may have caused an outage at the incident location, unless the source of the outage appears to have been related to the incident location or the transmission-level outage de-energized the incident location; or
- Certain minor alarms sent by protection devices that did not result in a sustained outage at the incident location.

Raw data has, however, been provided in response to other questions.

PG&E has not reviewed potentially relevant information that is in the possession of CAL FIRE or any other entity. The causes of the incidents are still under investigation and it is premature to draw conclusions about whether the “fire locations” or “incident locations” addressed by these Reports are points of origin.

Moreover, PG&E has relied on some publicly available information provided by third parties, such as CAL FIRE. For example, PG&E has relied on the start times designated by CAL FIRE as indicated in PG&E’s response to Question 25, submitted to the CPUC on January 31, 2018, in generating these Reports. PG&E is not presently able to validate this information.

For these reasons, among others, the facts described in the Reports may or may not be relevant to questions of causation or origin with respect to any incidents, and there may also be other facts not in the Reports that are relevant to questions of causation or origin of any incidents.

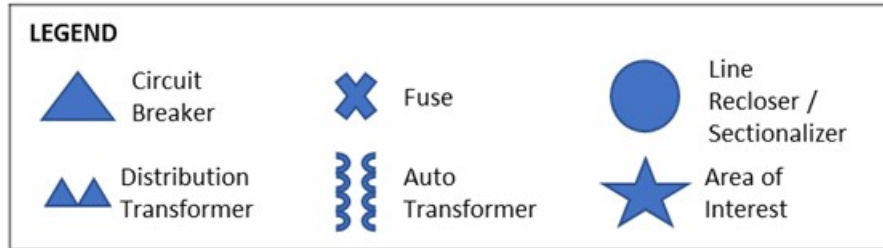
In addition, please find a list of additional explanations related to particular points.

**Single Line Diagrams**

For ease of reference, PG&E has included reproductions of the single line diagrams produced in response to Question 28, submitted to the CPUC on December 29, 2017.. Any reference to “area of interest” in the single line diagrams refers to the incident location, as defined by the CPUC’s December 7, 2017, letter. The single line diagrams show the incident location and the location of all protection devices upstream of the incident location back to the distribution circuit breaker at

the substation. Smart Meters, switches, and any devices downstream of incident locations are not shown on the single line diagrams, although they may be referenced in the Reports.

Below please find a legend that explains the symbols used in the diagrams.



### First Responders

As indicated above, in response to Question 54, PG&E has included in its Reports an account of the first PG&E employee who attempted to access the incident location before the CPUC's site visit with PG&E to the incident location, as defined by the CPUC's December 7, 2017, letter.

### Repair and/or Restoration Work

PG&E has included information related to when repair and/or restoration work was completed. PG&E has not attempted to include all dates on which repair crews were present at or near incident locations, as defined by the CPUC's December 7, 2017, letter, either in the incident overview or the timeline.

### Timeline

As indicated above, in response to Question 1, PG&E has included a timeline of certain equipment operations and actions of PG&E employees at or near the incident locations, including during the period 12 hours prior to CAL FIRE's designated start time, as indicated in PG&E's response to Question 25, until the date (if known) when CAL FIRE obtained PG&E facilities for evidence, CAL FIRE released the incident scene, or repair and/or restoration work was completed, whichever event came last. PG&E has not included every possible data point during the timeline time period. Rather, as indicated above, the timelines include information that PG&E believes may be relevant to the incident location, as defined by the CPUC's December 7, 2017, letter, based on information currently known. Where records have been produced, PG&E provided the Bates number. Within a single row, some information may be based on records that have been produced, while other information may be based on records or other information that have not been produced.

### Operational Data

PG&E has relied on certain operational data sets (*e.g.*, SCADA, AMI) in preparing these Reports. There may be data discrepancies between different operational data sources. For example, timestamps of a common event across different operational data sources may differ. In these Reports, PG&E has documented to the best of its ability the most accurate occurrence time based on its current understanding.



*SCADA Data*

SCADA (Supervisory Control And Data Acquisition) data includes alarm and event data remotely collected in real time from data-collection capable devices on PG&E's electric distribution and transmission circuits. Reclosers and circuit breakers are examples of devices that may report SCADA data. Fuses do not have SCADA connectivity and, therefore, do not report SCADA data. SCADA alarms and events memorialize electrical events on a circuit. However, they are associated with the device that collected them and do not include information on the specific cause or precise origin location of the electrical event that they memorialize.

As noted above, PG&E has not included all SCADA events in the Incident Overview or the Timeline. For example, Minimum To Trip ("MTT") alarms have not been included. MTT alarms are generated when a SCADA-enabled device identifies a circuit load that exceeds a maximum threshold load but for less than a certain amount of time. MTT alarms can be frequent and do not include information on the specific cause or origin location of the event that triggered them. A record of all SCADA events and alarms that occurred during the requested time periods has been previously produced in response to Question 25, submitted to the CPUC on January 31, 2018, in the Bates range PGE-CPUC\_00007875-7911.

*AMI Data*

Smart Meters are electric meters designed to record customer electricity usage, primarily for billing purposes. They can record and transmit electrical data including usage, voltage and event data ("Smart Meter" or "AMI" data). In certain situations, data collected by these meters may be helpful to determine information about outages. For example, a Smart Meter's "last gasp" is an event that may show the time at which a specific Smart Meter lost power. In conjunction with data from other Smart Meters, "last gasp" data might indicate when a certain location on the electric grid lost power or some other secondary problem. A "NIC power down" is a recorded log event when a Smart Meter initiates a shut down. A "zero volt reading" occurs when a meter is partially energized (between 25% and 75%) at the time of a reading. Each of these readings will only occur if the communication from the Smart Meter is successfully received (or subsequently retrieved and downloaded if the Smart Meter is still accessible).

As noted above, PG&E has not included all AMI events in the Incident Overview or the Timeline. For example, sag or swell events have not been included. Smart Meters record these events when they detect a decrease (sag) or increase (swell) in voltage above or below a certain threshold for more than a certain period of time. Sag and swell events do not have specific timestamps; the data indicates only that they occurred during a certain time interval. Sag and swell events may indicate unusual activity; however, they do not indicate the location of that unusual activity. Smart Meter data was not requested in the November 21, 2017, Data Requests and has not been produced in response to those Data Requests.

Reclosing Device Operations

PG&E is providing certain times at which reclosing devices "operated" (opened or closed), which could include multiple operations depending on the device's settings before the device ultimately stayed closed or stayed open.

### Outage Records

PG&E has relied on certain information from its Integrated Logging Information System Operations Database (“ILIS”) in preparing these Reports. As explained in response to Question 27, submitted to the CPUC on March 30, 2018, ILIS is PG&E’s system of record for distribution transformer-level and above outages. ILIS is the application used by the distribution system operators to document information pertinent to the operation of the electric system. Due to the nature of how information is documented in the application, there may be discrepancies in outage start times and other information between ILIS and other data sources. For example, ILIS does not record single-customer or service-level outages, in accordance with CPUC Decision 96-09-045 and Advice Letter 3812-E on outage reporting requirements. Data from these ILIS records should be reviewed and considered together and in conjunction with those other data sources.

Outage cause information in ILIS is preliminary and is based on the best available information at the time, from initial field intelligence and through spot check quality reviews.

### Smart Meter Service Point ID Numbers

Some PG&E records identify Smart Meters by their associated Service Point ID number (“SP\_ID”), while other records identify Smart Meters by their associated “Badge” numbers. For consistency, all Reports use SP\_ID to identify Smart Meters. PG&E will provide a translation between SP\_ID and Badge numbers upon request.

### Source List

At the end of each Report, PG&E has included a list of records on which it relied in drafting each Report. When PG&E indicates in a Report that information is per PG&E records, PG&E is referring to the records identified at the end of the Report. Where records have been produced, PG&E provided the Bates number. In addition to the items on the source list, PG&E relied on a variety of internal databases to make an assessment of location information regarding devices and individuals (*e.g.*, GIS, GPS) and observations made by PG&E employees including the first PG&E employee who attempted to access the incident location before the CPUC’s site visit with PG&E to the incident location.

### Confidentiality

The Reports include confidential information. PG&E seeks to protect this information as confidential. PG&E has provided a corresponding confidentiality declaration with the production.